

Summer 2021 Outlook

Winter 2021-22 Preview

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WWW.WEATHER.GOV/PHOENIX

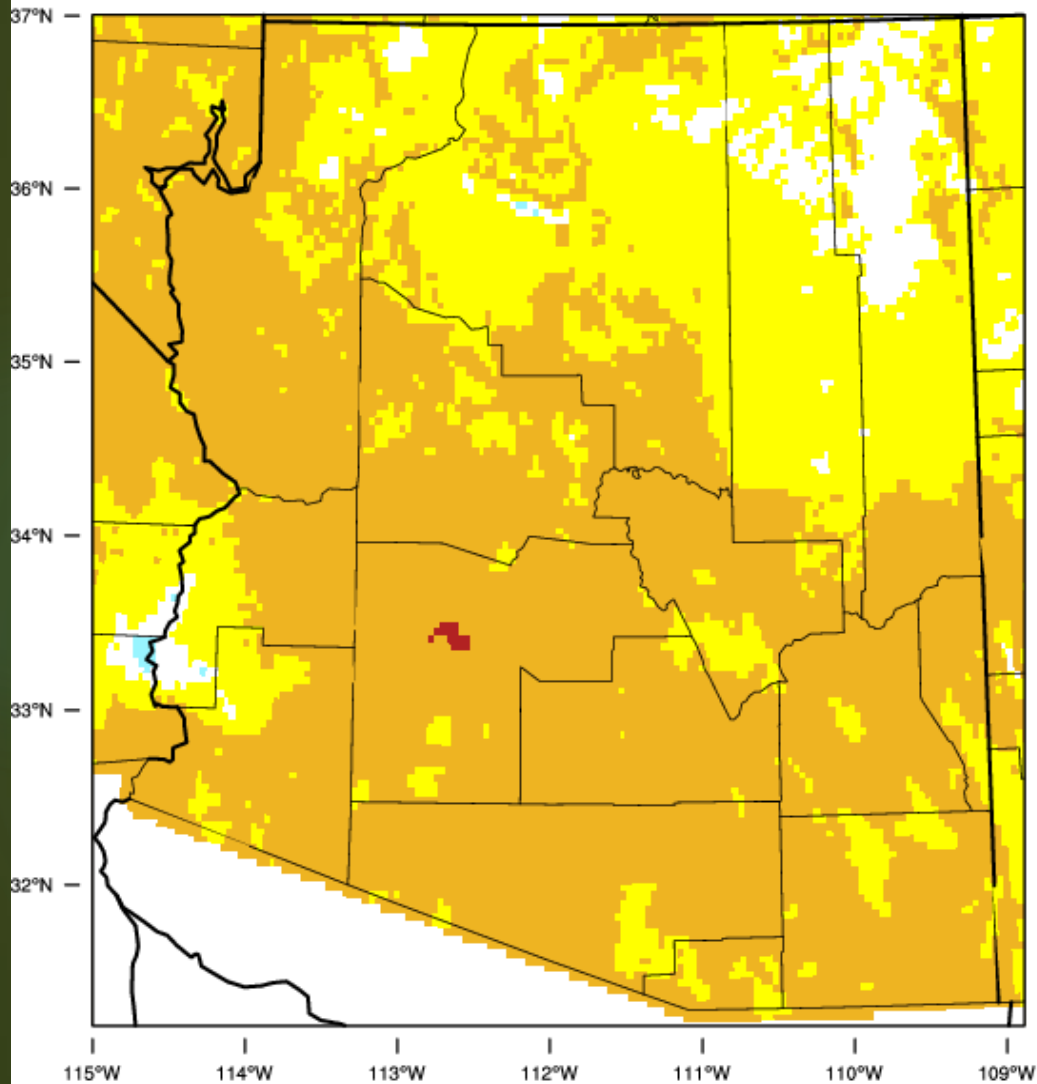




La Niña 2020-21

Arizona - Mean Temperature

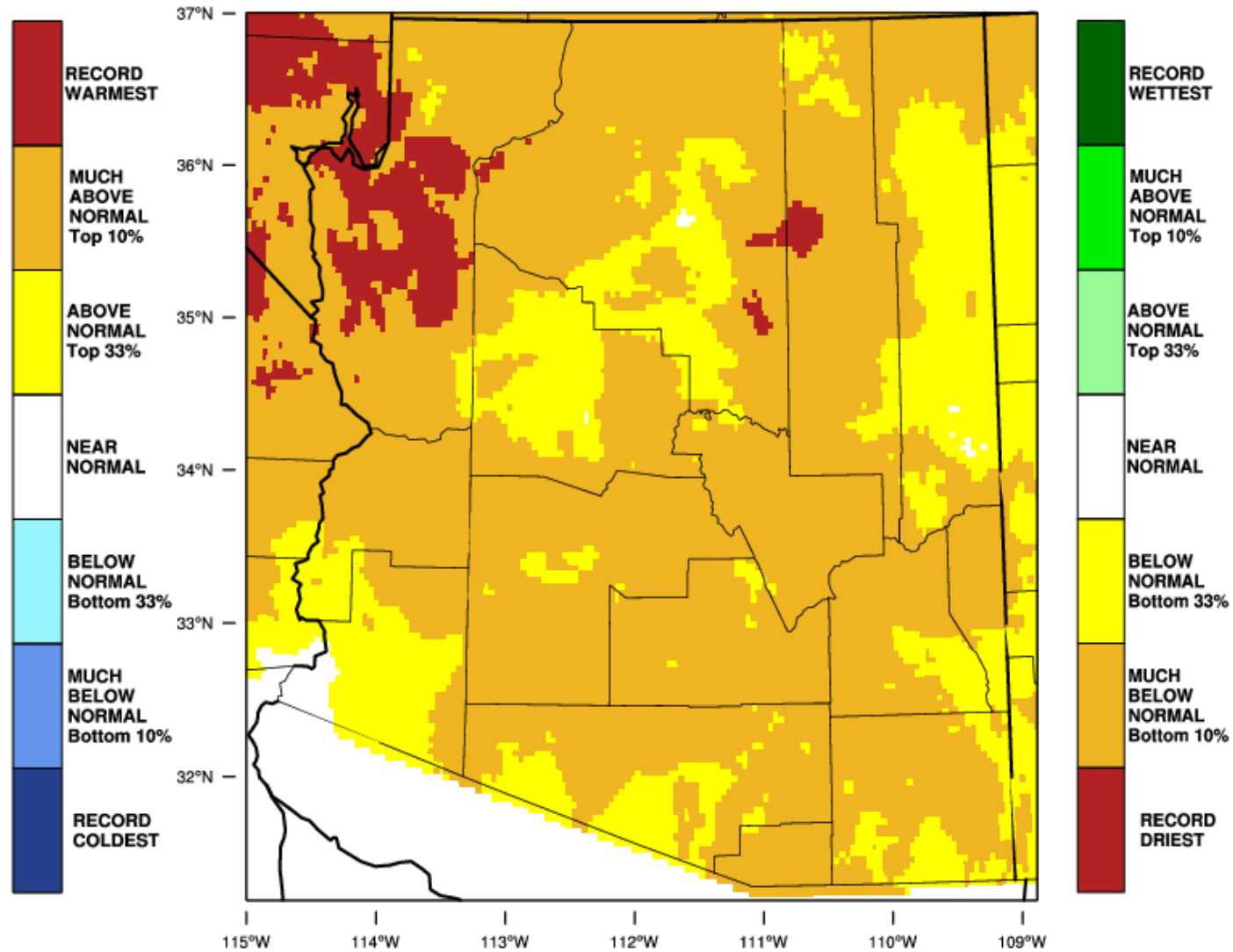
October-April 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 MAY 2021

Arizona - Precipitation

October-April 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 MAY 2021

Rankings (1895-2010)



New Normals (1991-2020)

U.S. ANNUAL PRECIPITATION COMPARED TO 20th-CENTURY AVERAGE

1901-1930



1911-1940



1921-1950



1931-1960



1941-1970



1951-1980



1961-1990



1971-2000



1981-2010

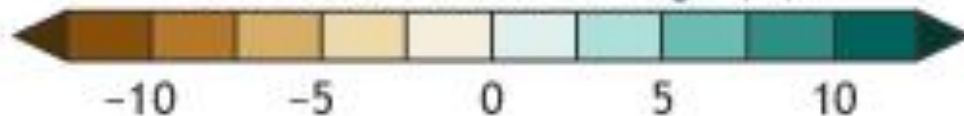


1991-2020



30-year Normal
compared to 1901-2000

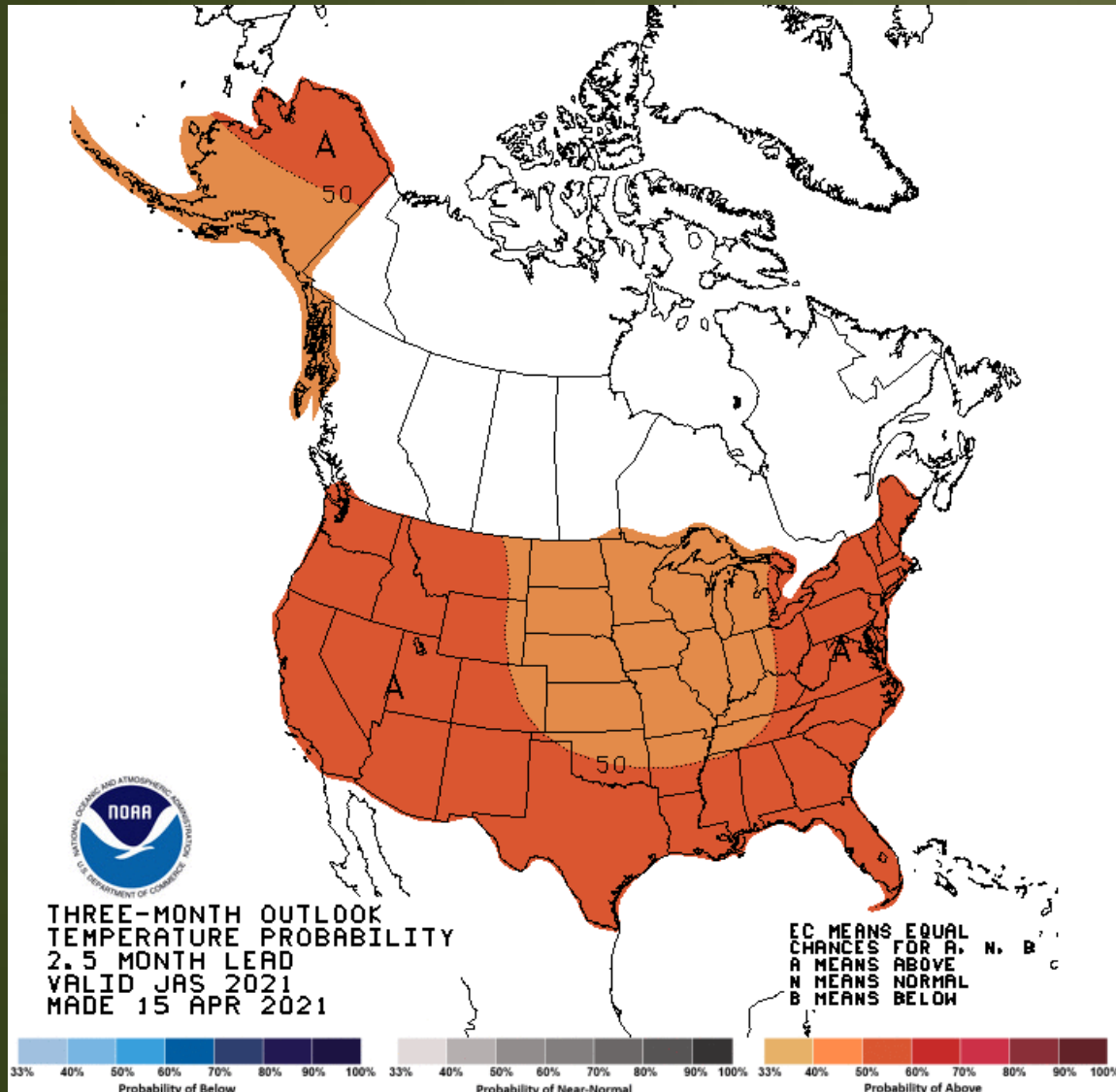
Difference from average (%)



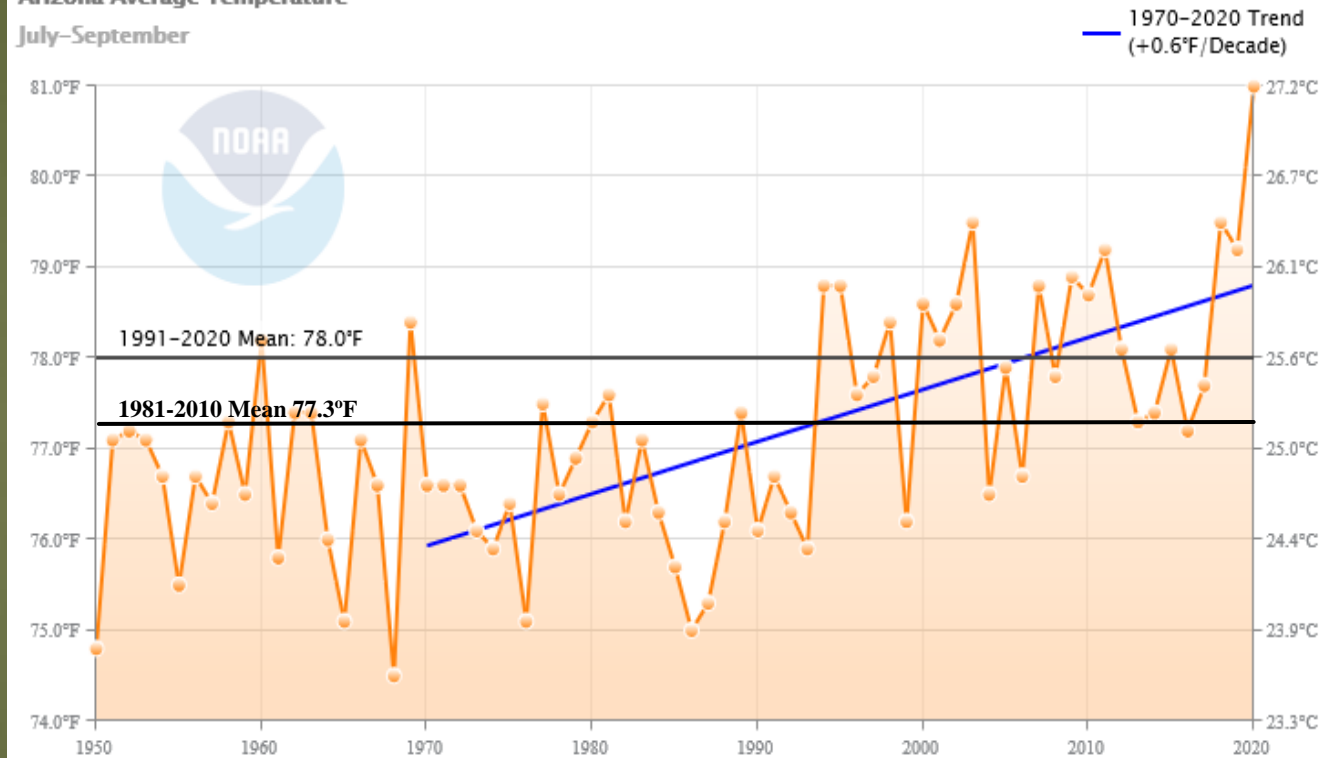
NOAA Climate.gov
Data: NCEI



Outlook: Jul/Aug/Sep 2021



Arizona Average Temperature
July-September

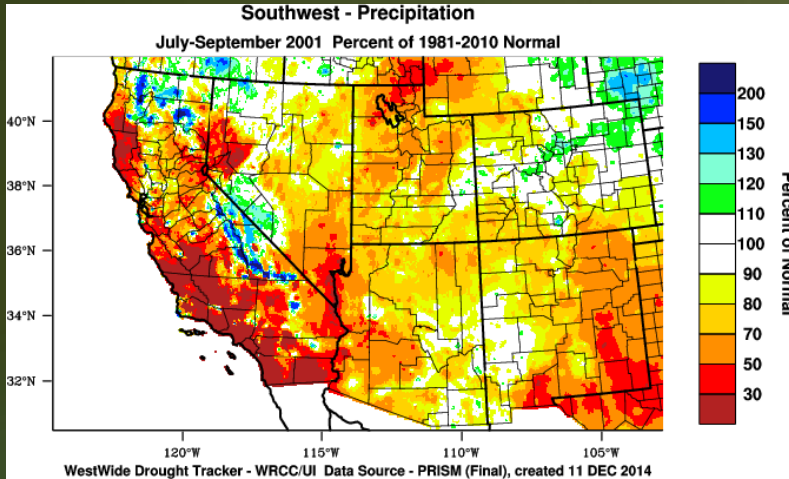


Three-month averages

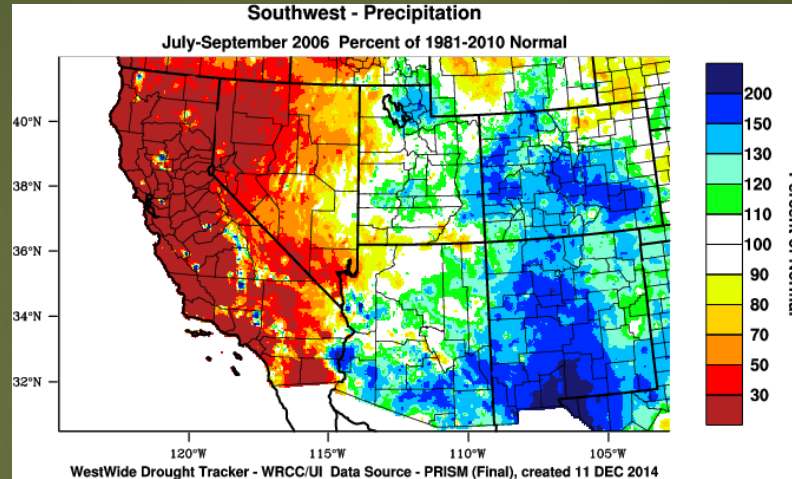
Better odds for above normal temperatures



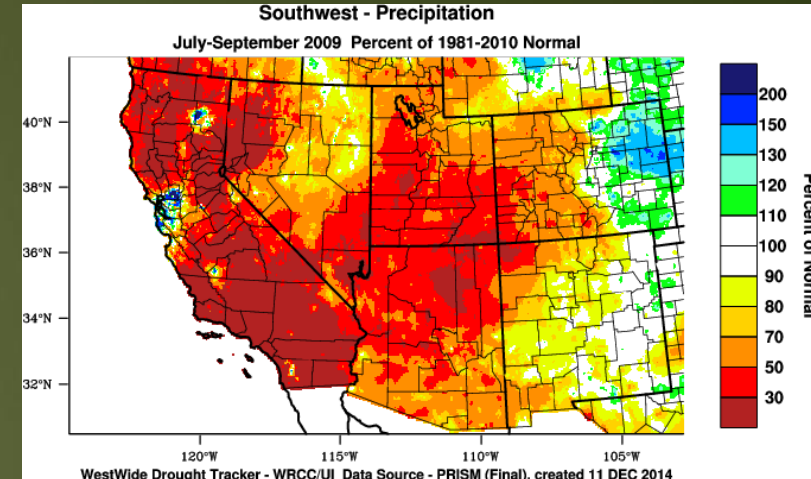
Recent Monsoon Rainfall following Weak-Moderate La Niña Winters (Jul-Sep Percent Avg Precipitation)



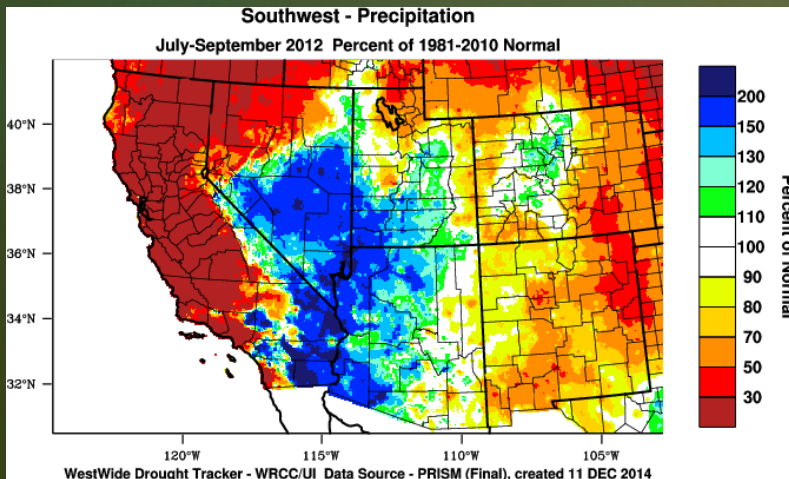
2001



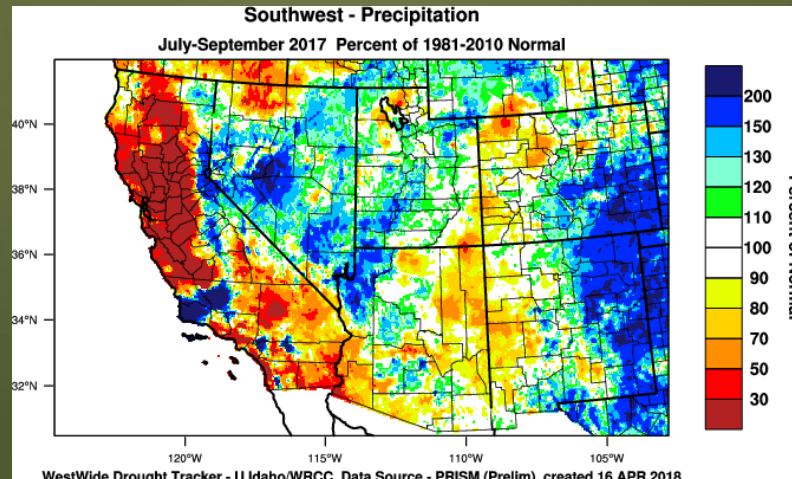
2006



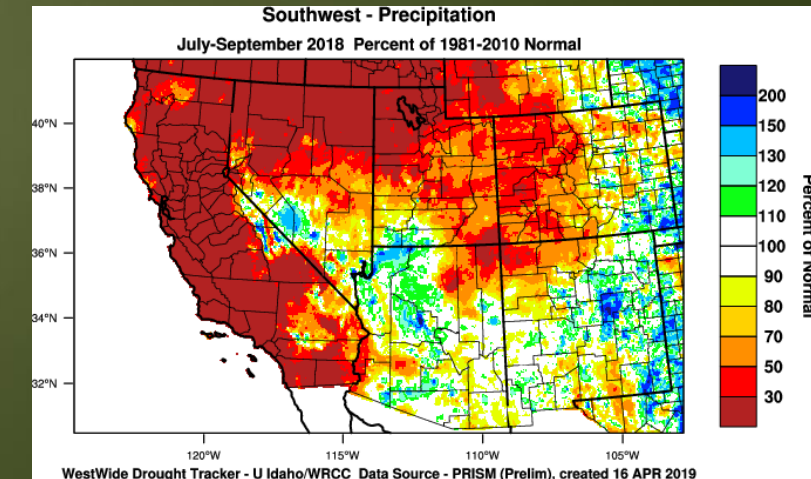
2009



2012



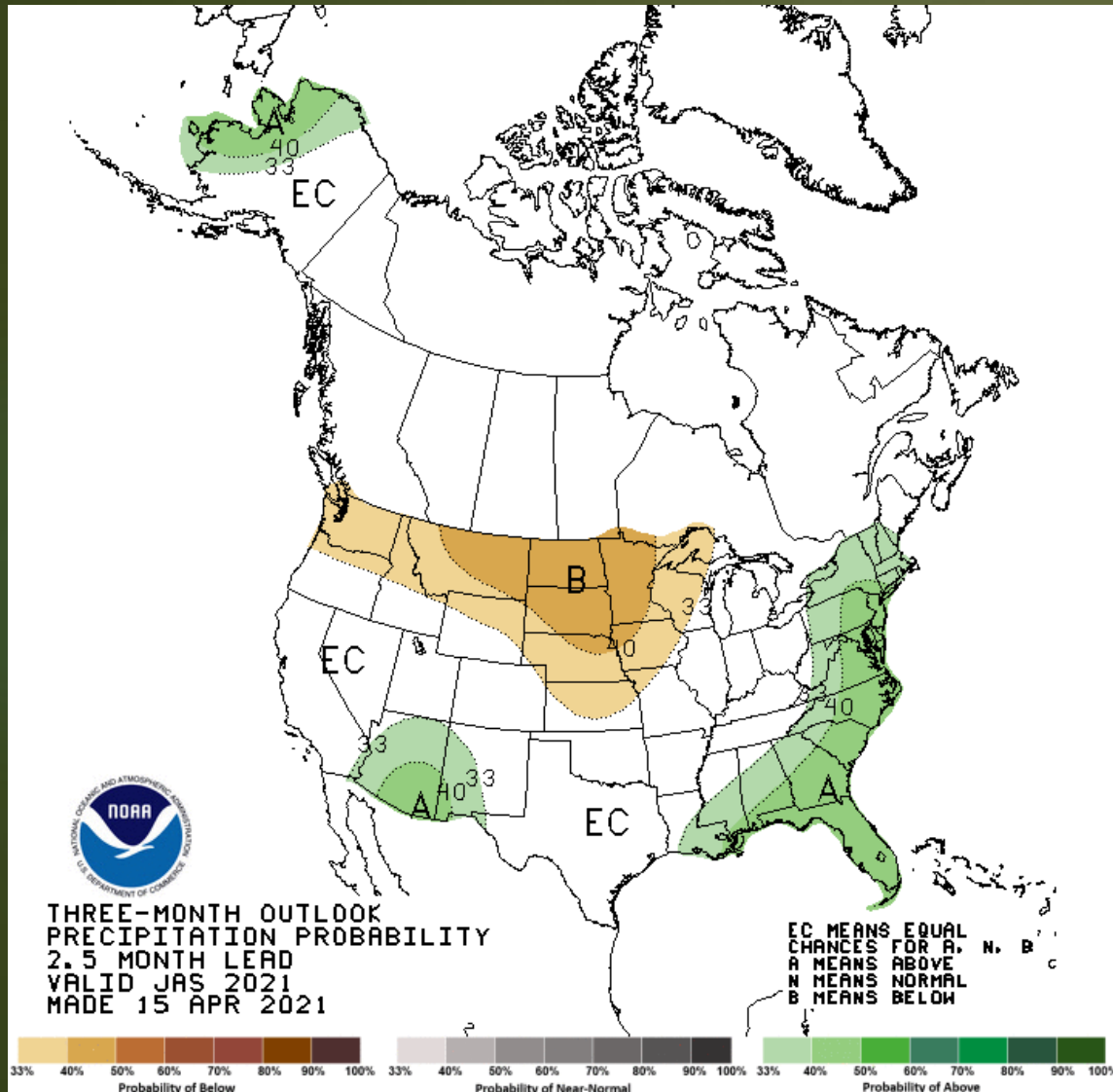
2017



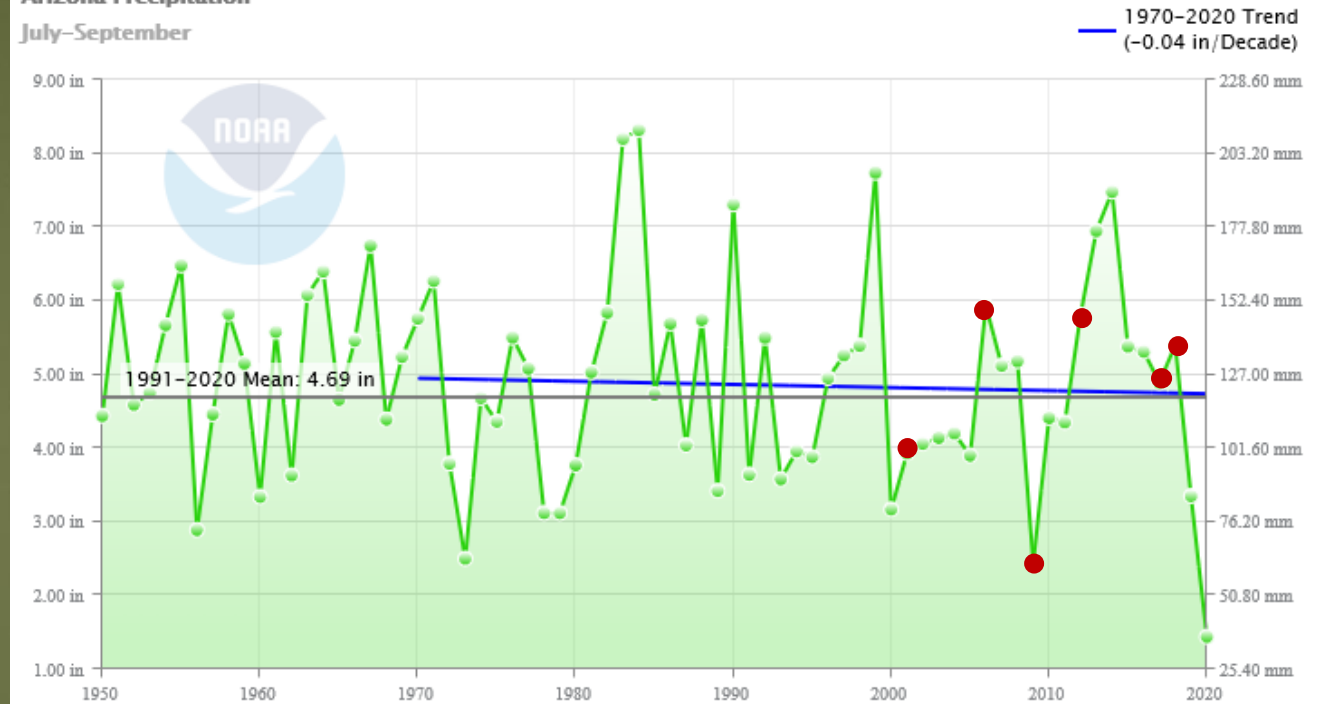
2018



Outlook: Jul/Aug/Sep 2021



Arizona Precipitation
July-September



Red dots = Monsoon following Weak-MDT La Niña

Three-month averages

Slightly better odds of above average
precipitation

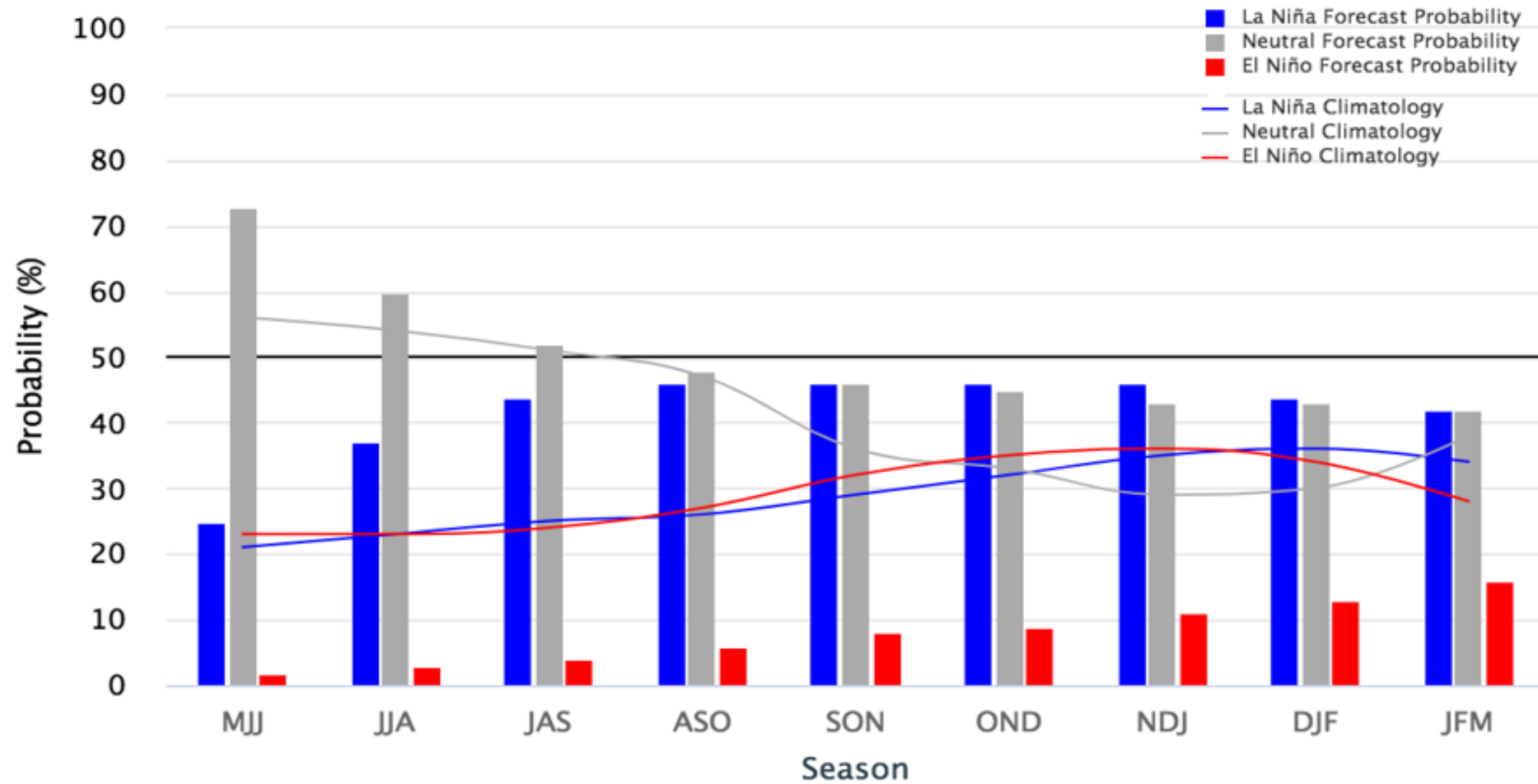


El Niño/La Niña Outlook – May 2021

Early-June 2020 CPC/IRI Official Probabilistic ENSO Forecasts

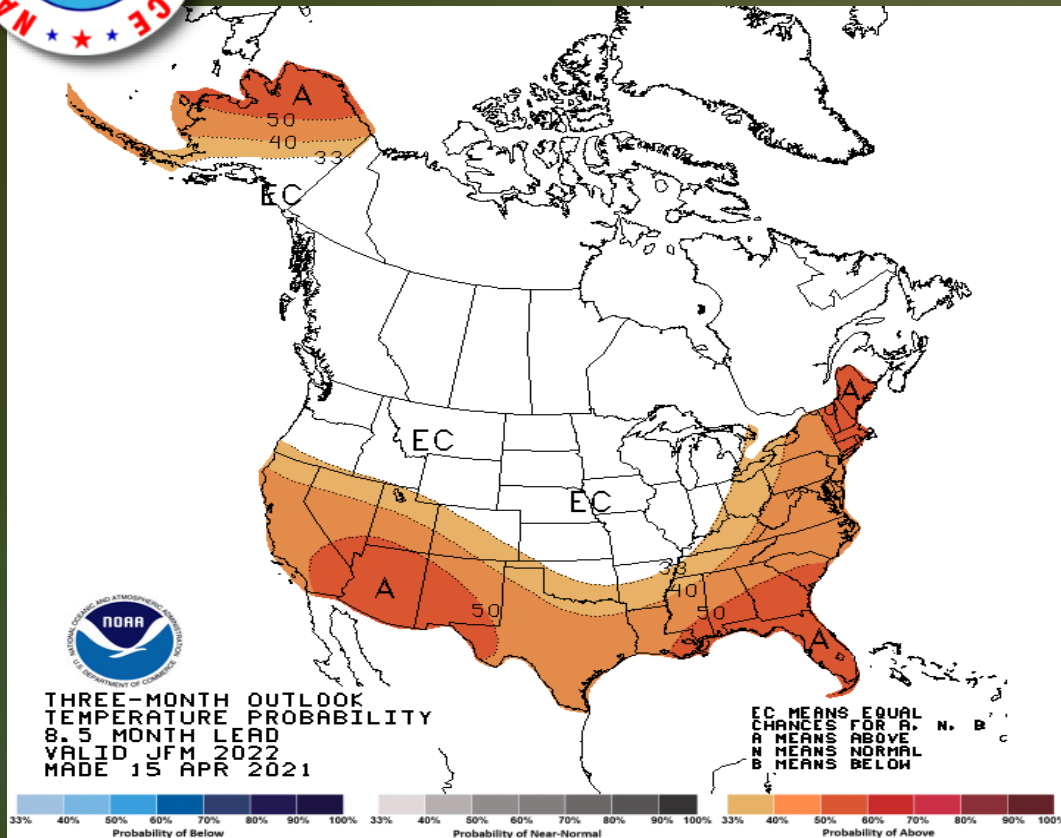
ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: -0.5°C to 0.5°C



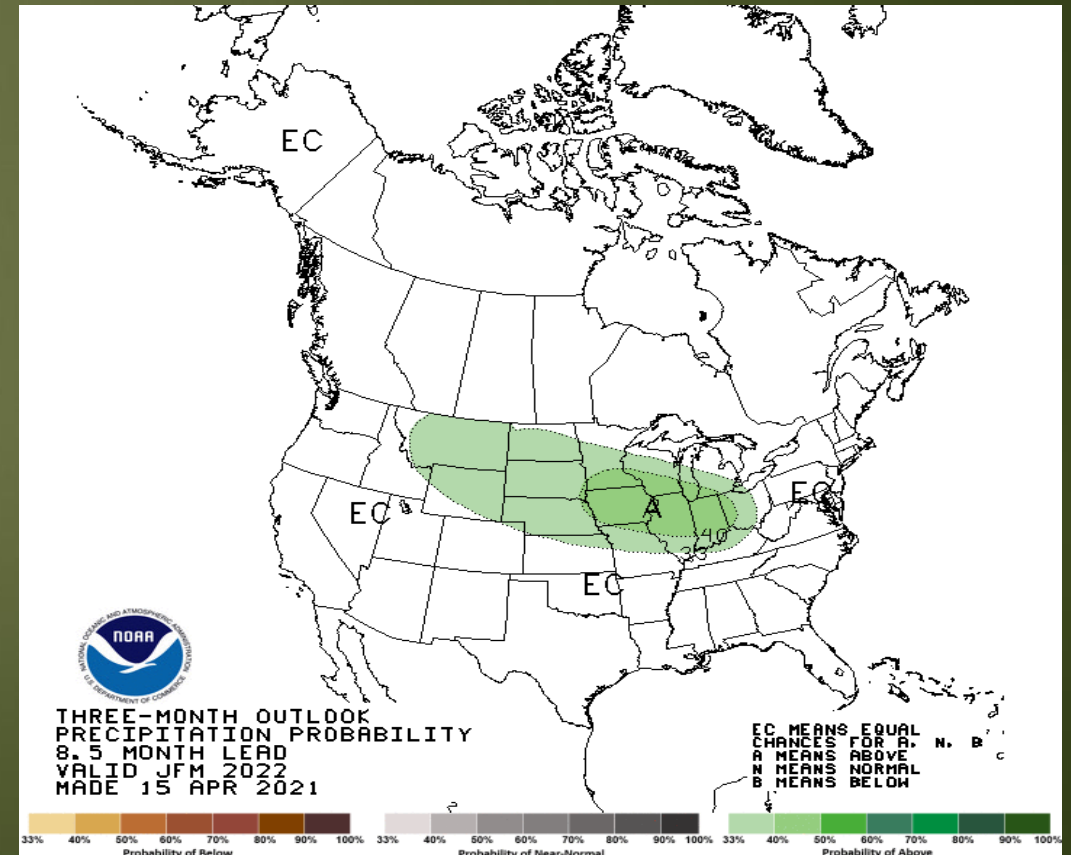


Outlook: Jan/Feb/Mar 2022



Three-month averages

Shading indicates chances of above or below normal



Better odds for above normal temperatures

No notable tilt in odds in precipitation outcome



Summary

- Odds favor a warmer than average summer based on model output, but especially trends over the past 20 years
- A slight push in odds towards a wetter monsoon exists, but randomness of thunderstorms will probably still result in some communities falling below average
- Best case: monsoon would help resolve soil moisture deficits and contribute to inflow/side flow into regional reservoirs
- ~40% chance of La Niña redeveloping fall/winter 2021-22 with ~40% chance of ENSO neutral
- If La Niña does reemerge, drier conditions would be likely again next winter



Special Thanks to Nancy Selover for contributions as MTC co-chair and ICG member serving the people of Arizona